



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/743,713	05/07/2001	Douglas Philip Turvey	616-034	7323

7590

01/29/2003

Lowe Hauptman Gilman & Berner
1700 Diagonal Road Suite 310
Alexandria, VA 22314

EXAMINER

DINH, NGOC V

ART UNIT PAPER NUMBER

2187

DATE MAILED: 01/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/743,713

Applicant(s)

TURVEY, DOUGLAS PHILIP

Examiner

NGOC V DINH

Art Unit

2187

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 July 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 July 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6. 6) ☐ Other: _____

DETAILED ACTION

Specification

1. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.
2. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

3. The font and spacing of the lines of the specification is such as to make reading and entry of amendments difficult. New application papers with better font and lines double spaced on good quality paper are required.
4. The claims are objected to because the font of the lines are crowded too closely together and not readable, making reading and entry of amendments difficult. Substitute claims with lines one and one-half or double spaced on good quality paper are required. See 37 CFR 1.52(b).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 are rejected under 35 U.S.C.102 (b) as being anticipated by Houseman et al. [PN 4,559,618]

4. As per claims 1-3:

Houseman teaches a content addressable memory comprising a CAM control logic unit [129, fig. 1] and a plurality of cells [107, fig. 1] connected in a chain, each cell comprising: a memory block [105, fig. 1] coupled to a common address bus [113, fig. 1]; a comparator [fig. 5] coupled to a common data bus [117, fig. 1; d(0)-d(n), fig. 5] and to the data interface of the memory block; switching means [bi-directional; abstract] coupling the data interface of the memory block with the data bus, and a logic block [fig. 6C] including a Match flip-flop [6189, fig. 6C; col. 20, lines 15-45]; the memory being operable: In a Search phase [e.g., match operation] to serially match a sequence of words on the common data bus with the contents of a sequence of addresses in the memory blocks (12) of the cells (10); and in an Access phase [e.g., read/write operation], to render the cells

matched in the Search phase serially available for access via the common address and data buses.

In summary, Houseman teaches a content addressable memory according to claim 1 wherein each cell contains a memory block, a logic block, a comparator, and a bi-directional switch, and the content addressable memory implemented on an integrated circuit chip [col. 1, lines 40-65; col. 2, lines 49-59; col. 4, lines 44-65; col. 5, lines 19-30; col. 6, lines 38-57; col. 12 line 3 to col. 14, line 55].

5. As per claims 4-7:

Houseman teaches a content addressable memory (CAM), wherein: several such chips can be chained [fig. 2, 4; col. 2, lines 60-65; col. 22, lines 15-23]; each chip includes a control unit which can be disabled [col. 19, line 60 to col. 20, line 13; col. 20, lines 55-65], and a MASK bus input which determines which bits of the words of the sequence of words are used for matching in the Search phase [E 127, fig. 1; col. 5, lines 1-5; col. 15, lines 12-30]. Houseman further teaches a CAM including a return line from the end of the chain of cells back to the CAM control unit which changes state when all Match flip-flops in the chain have been accessed [col. 5, lines 51-65; col. 6, lines 3-35].

6. As per claims 8 and 11:

Houseman teaches a method of operating a content addressable memory wherein a standard byte address is chosen in all data blocks and a byte different from the inactive state of the data bus is included in that address in every data block. The standard byte address is filled with one data value if the data block in that cell is valid and another data value of the data block in the cell is cleared, ie invalid [col. 6, lines 3-35; col. 10, lines 38-60].

7. As per claims 9-10:

Houseman teaches method of operating a content addressable memory wherein each cell is divided into a plurality of distinct data blocks [fig. 1], and a plurality of cells are combined into an extended data block with all cells of the block containing corresponding key fields [col. 1, lines 40-55].

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Wyland PN 5,440,715 discloses operation of CAM.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ngoc Dinh whose telephone number is (703) 305-3023.

The examiner can normally be reached on Monday-Friday 8:30 AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Do H. Yoo, can be reached on (703) 308-4908. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.



NGOC DINH

Patent Examiner

ART UNIT 2187

January 12, 2002



DO HYUN YOO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100